

What is claimed is:

1. A casting apparatus comprising:

a die which has an opening section above the die so as to pour a molten metal therefrom;

a heater which is disposed above the die;

a gas supplying section which supplies an inert gas to a surface of the molten metal; and

a lid which is disposed between the surface of the molten liquid and the heater; and

a lid moving structure which moves the lid relatively to the die and controls an opening amount of the opening section above the die.

2. A casting apparatus according to Claim 1 wherein the lid moving structure adjusts the opening amount according to a flow amount of the inert gas.

3. A casting apparatus according to Claim 1 wherein the lid moving structure has a structure for moving the lid relatively to the die vertically, horizontally, or rotatively.

4. A casting apparatus according to Claim 1 wherein:

the molten metal is a molten silicon; and

at least a bottom surface of the lid is coated by a non-reactive material with a silicon oxide gas or a silicide.

5. A casting method comprising the steps for:

pouring a molten metal from an opening section which is disposed above the die;

supplying an inert gas to a surface of a molten metal;

controlling a heating operation of a heater by adjusting a disposition of the lid

which is disposed above a surface of the molten metal so as to solidify the molten metal;

and

controlling the opening amount of the opening section above the die by moving the lid relatively to the die according to a flow amount of the inert gas.